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Office Memorandum UNITED STATES GOVERNMENT

TO : The Files

July 1954

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FROM

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SUBJECT: Electromechanical Transmitter - ET-2 (Task 1 & Task 7) XG-578.

1. The ET-2 is being developed by the

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under Task 1 of Contract XG-578. A review of the progress made by the company in the development work and the present status of the equipment appears to be advisable.

2. The development of the ET-2 equipment was to include three phases which may be identified as a (1) study phase, (2) engineering model development phase and (3) prototype construction phase (3 units). The study phase began 19 November 1951 and completed 25 March 1952. On 8 April 1952 the Contractor was authorized to proceed with the design of the engineering model. The engineering model was delivered 9 April 1954 for an engineering evaluation. It was apparent at the time of acceptance (for evaluation) that certain modifications of the equipment were desirable and the Contractor agreed that these modifications would be incorporated in the three prototype units required as the third phase of the contract. However, such modifications are only corrections to faulty engineering design, and consider no design improvements for increasing the utility of the ET-2. Further, the Contractor estimates that one year will be required to complete the construction of the prototypes.

3. It is not felt that the complexity of the ET-2 design is such as to warrant a development program that is to extend over such a long period of time (3½ years) and further, that the Agency's concept of such equipment has progressed with new miniaturized techniques such as to render the equipment obsolete before any thoughts of production might become a reality.

4. To extend the operational compatibility for agent use it would appear that the following features would be desirable:

- a) Detachable (or separate) tape storage and keyboard units. The tape storage unit to contain own miniaturized motor and electronic circuitry and battery power connections.
- b) Keyboard arrangement of letters to be in alphabetic sequence with provisions for foreign language identification. The figures to be separate keys. Redesigned stepping mechanism for quiet and positive indexing.

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Electromechanical Transmitter - ET-2

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- c) Provide (if possible) automatic line feed and carriage return, or if not feasible, a neon light to indicate the operation of the line feed and carriage return.
- d) Greatly reduced size to include printed circuitry (for ruggedness) subminiature tubes and/or transistors.
- e) A miniaturized DC volt meter indicating correct voltage operating level.
- f) An equipment case compatible with agent operations.

5. The above modifications were discussed with the Contractor on two previous visits to St. Paul, at which time it was indicated that the Contractor favored a separate and parallel development program.

6. A visit to is planned for the first week of July to determine to what extent the Contractor will redesign the three prototypes to include the above features under the present contract. After such a determination, and if these features may not be incorporated in the prototypes, a staff study is planned for a re-evaluation of the Agency requirements.

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ROUTING AND RECORD SHEET

INSTRUCTIONS: Officer designations should be used in the "TO" column. Under each comment a line should be drawn across sheet and each comment numbered to correspond with the number in the "TO" column. Each officer should initial (check mark insufficient) before further routing. This Routing and Record Sheet should be returned to Registry.

FROM:

NO.

14-1718 - 921

DATE

8 July 1954

OC-E/R&D-EP *for*

TO	ROOM NO.	DATE		OFFICER'S INITIALS	COMMENTS
		REC'D	FWD'D		
1. R&D		7/8.		<i>AW</i>	Approval
2.					
3.					
4.					
5. OC-E		7/13		<i>AW</i>	Information
6.					
7.					
8. OC-E/R&D-EP					For File
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Comments: - Also, the equipment should include a fast rewind to permit the starting point to be easily reached for short messages or "on line" operation - AW.

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